

### ABSTRACT OF THE DISCLOSURE

A method for serial data transmission between a position measuring system and a processing unit that includes transmitting position data and further data between the position measuring system and the processing unit in serial form as digital data words, transmitting up-to-date position data between the position measuring system and the processing unit upon a position request command and always transmitting further data, whose processing is not time-critical, immediately following the up-to-date position data.